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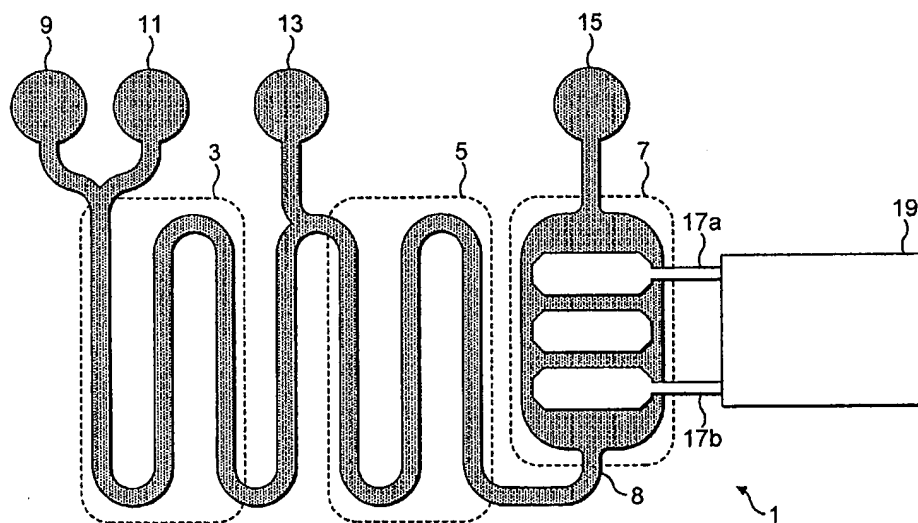
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(54) Title: REACTION CONDITIONS SENSOR



(57) Abstract: A method and apparatus (1) for detecting adverse conditions during the analysis of chemical and biological processes are disclosed. In one embodiment, the reaction conditions in a microelectrochemical reaction chamber (7) are monitored. The reaction chamber (7) comprises electrodes (17a, 17b) arranged to pass an electric current through reaction mixture located within the reaction chamber, thereby inducing an electrochemical reaction. A detection circuit (19) is provided to detect and measure the electric current flowing between the electrodes (17a, 17b). The detection circuit (19) generates a signal indicating whether the measured current lies inside or outside a predetermined range of values. If the measured current lies outside the expected range of values, then the reaction conditions are adverse. A single pair of electrodes may perform a dual function of both inducing the electrochemical reaction detection. In another embodiment, electrodes are for detecting the presence of analytes Using the combined techniques of surface enhanced Raman scattering and surface plasmon resonance.



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